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FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110			EXAMINER WILLIAMS, DON J	
			ART UNIT 2878	PAPER NUMBER

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/500,186	Applicant(s) FISH ET AL.	
	Examiner Don Williams	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>25 June 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 32 and 36 are objected to because the preamble statement should be consistent with the claim from which they are dependent. Claims 32 and 36 are actually quasi independent claims and should be rewritten as such. For examining purpose, the claims will be treated as a portable device with all the limitations of claim 1 included.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15, 17-34 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rios et al in view of Rice et al (4,906,100).

As to claim 1, Rios et al disclose a light source (10) for emitting light for exciting a fluorophore (A), wavelength range (555 to 565), and an intensifier (20) that increases and receives the light intensity of the fluorophore. Intensifier (20) is functionally equivalent to a detector. Rios et al fail to explicitly disclose a detector. Rice et al disclose a detector (14) receiving the fluorescence light (18) from the sample (11). It would have been obvious for one ordinary skill in the art to modify Rios et al to include a detector (14) receiving only fluorescence light (18) from the sample (11) as disclosed by

Art Unit: 2878

Rice et al to improve the fluorescence light conversion condition allowing clear and precise images to be displayed on a monitor for further laboratory analysis to be performed, (see figure 1, column 3, lines 1-37).

As to claims 2, 6, the modified Rios et al disclose a light source (10) (LEDs) which are known to be an inexpensive means of illumination. They are also known to be low power light emitting diodes (LEDs).

As to claims 3, 4, 5, the modified Rios et al is silent as to the exact power consumed. It would have been obvious for one ordinary skill in the art to select a light source having a specific power consumption of choice as claimed to improve the fluorescence luminous intensity received and processed by the detector allowing an image to be displayed on a monitor for further critical analysis to be performed, (see column 3, lines 43-45).

As to claims 7, 8, the modified Rios et al disclose a light source (10) as an LED having a luminous intensity of about 100 lux. Rios et al fail to explicitly disclose luminous intensities 1mCD to 10CD and 10mCD to 1CD. The luminous intensity of 100 lux disclosed by the modified Rios et al is functionally equivalent to the luminous intensities 1mCD to 10CD and 10mCD to 1CD as claimed. It would have been obvious for one ordinary skill in the art to select a light source having a specific luminous intensity of choice as claimed to improve the fluorescence luminous intensity received and processed by the detector allowing an image to be displayed on a monitor for further critical analysis to be performed, (see column 3, lines 43-45).

As to claim 9, the modified Rios et al disclose a light source (10) emits a colored light, (see figure 1, column 3, lines 57-60).

As to claim 10, the modified Rios et al disclose a light source (10) and infrared filter in front of a light source (10), (see column 4, lines 51-52).

As to claim 11, the modified Rios et al disclose light source (10) emits a colored light through an alteration and /or an addition (infrared filter) to light source (10), (see figure 1, column 2, lines 35-67, column 4, lines 51-52).

As to claim 12, the modified Rios et al disclose a light source (10) emits a colored light wherein the device has a filter (15) for filtering light emitted from light source (10), colored light is formed through filtering (see figure 1, column 3, lines 34-67).

As to claim 13, the modified Rios et al disclose a wide bandwidth (5-15) (500-600) excitation filter (15), (see figure 1, column 3, lines 47-59).

As to claim 14, the modified Rios et al fail to disclose gelatin filter. Rice et al disclose gelatin filter to filter out the interference light. It would have been obvious for one ordinary skill in the art to modify Rios et al to include gelatin filter as disclosed by Rice et al to improve the filtering of the interference light allowing only the orange red fluorescent glow of the sample to be imaged and displayed on the monitor for further critical analysis to be performed, (see column 4, lines 51-66).

As to claim 15, the modified Rios et al disclose a light source (10) emits a colored light with a light having a wavelength in the visible spectrum and light having a wavelength outside the visible spectrum, (see figure 1, column 2, lines 35-65).

As to claim 17, the modified Rios et al disclose a filter (15) for filtering emitted light from light source (10), (see figure 1, column 2, 40-44).

As to claim 18, the modified Rios et al disclose filter (15) with a selected wavelength range (555 to 565), (see column 2, lines 53-56).

As to claim 19, the modified Rios et al disclose a filter (15) selected to a preferred wavelength or wavelengths (555 to 565) for exciting the fluorophore (A), (see figure 1, column 2, lines (35-65).

As to claim 20, the modified Rios et al disclose a plurality of light sources (10), (see figure 2, column 4, lines 38-47).

As to claim 21, the modified Rios et al disclose an array of light sources (10), (see figure 2).

As to claim 22, the modified Rios et al disclose photodetector (14) is of low sensitivity, (see figure 1, column 3, lines 33-37).

As to claim 23, the modified Rios et al disclose a photodetector (14) includes a camera, photometer, or any light detector, (see figure 1, column 3, lines 50-54).

As to claim 24, the modified Rios et al disclose a photodetector (14) that is functionally equivalent to a photodiode or any detector, (column 3, lines 50-54).

As to claim 25, the modified Rios et al disclose a camera that is functionally equivalent to a CCD, (see column 3, lines 50-54).

As to claims 26, 27, the modified Rios et al disclose a photoector (14) and exposure time. The modified Rios et al fail to explicitly disclose an exposure time in a range of 1/100 to 60 seconds and 1/70 to 1/10 second. Rice et al disclose exposure

time. It would have been obvious for one ordinary skill in the art to select a photodetector for having a specific exposure time range of about 1/100 to 60 seconds and 1/70 to 1/10 second as claimed to improve the fluorescence luminous intensity received and processed by the detector allowing an image to be displayed on a monitor for further critical analysis to be performed, (see column 5, lines 7-32).

As to claim 28, the modified Rios et al disclose the fluorophore (A) emits light in a near infrared range (250-950), (column 7, lines 30-33).

As to claim 29, the modified Rios et al disclose a filter (15) for filtering light from the excited fluorophore (A), (see figure 1, column 2, lines (35-44).

As to claim 30, the modified Rios et al disclose a filter (25) is selected corresponding to wavelengths of emitted light from the excited fluorophore (A), (see figure 1, column 2, lines 35-67).

As to claim 31, the modified Rios et al disclose the fluorophore (A) emits light in an infrared range (250-950) wherein the emitted light from the excited fluorophore (A) is filtered functionally equivalent to a 590nm Long Pass filter, (see figure 1, column 2, lines 35-65).

As to claim 32, the modified Rios et al disclose a portable device and a video recording system (45). The modified Rios et al fail to explicitly disclose a computational device for performing a computation. It would have been obvious for one ordinary skill in the art to use a video recording device that is functionally equivalent to a computer to process the fluorescent light or a specified wavelength from the fluorophore sample in order to determine the wavelength value corresponding to a an image that is displayed

Art Unit: 2878

on a monitor allowing critical analysis of the fluorophore sample to be performed, (see Abstract, column 4, line 27).

As to claims 33, 34 the modified Rios et al disclose a peripheral device as a (remote monitor), (see column 4, lines 35-37).

As to claim 36, the modified Rios et al disclose a portable device wherein the light source (10) emits a fluorophore sample (A) and the fluorescence light from the fluorophore sample (A) is detected by the photodetector (14), (see figure 1, column 2, lines 35-65, column 3, lines 33-52).

As to claim 37, the modified Rios et al fail to explicitly disclose a computational device for performing a computation. The modified Rios et al disclose a video recording system (45). It would have been obvious for one ordinary skill in the art to use a video recording device that is functionally equivalent to a computer to process the fluorescent light or a specified wavelength from the fluorophore sample in order to determine the wavelength value corresponding to a an image that is displayed on a monitor allowing critical analysis of the fluorophore sample to be performed, (see Abstract, column 4, line 27).

As to claim 38, the modified Rios et al disclose computations on a signal obtained from photodetector (14).

As to claim 39, the modified Rios et al disclose displaying a result of computations.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rios et al in view of Rice et al and further in view of Margosiak et al (5,760,407).

As to claim 16, the modified Rios et al disclose a light source (10) emits a colored light. Rios et al fail to explicitly disclose the group consisting of ultraviolet, white, blue, green, yellow-green, yellow, orange, red, and infrared. Margosiak et al disclose ultraviolet, blue, white, green, yellow-green, yellow, orange, red, and infrared luminous intensities. It would have been obvious for one ordinary skill in the art to further modify Rios et al to include ultraviolet, blue, white, green, yellow-green, yellow, orange, red, and infrared luminous intensities as disclosed by Margosiak et al to improve the luminous emissions from the UV light source wherein each color corresponds to a specific image of the fluorescent sample, (see figure 2, column 4, lines 1-40).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rios et al in view of Rice et al and further in view of Parker et al (3,814,939).

As to claim 35, the modified Rios et al disclose a sample (A). The modified Rios et al fail to disclose a lateral flow immunochromatography device. Parker et al disclose a chromatographic system that is functionally equivalent to an immunochromatography device. It would have been obvious for one ordinary skill in the art to further modify Rios et al to include a lateral flow immunochromatography device that is functionally equivalent to a chromatographic system to improve the detection of portions of the fluorophore sample corresponding to fluorescent wavelengths allowing precise and

clear image of the fluorophore sample to be recorded and displayed on a monitor, (see Abstract, figure 1, column 2, lines 15-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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